

LEL I

Post-Closure Monitoring and Maintenance Plan



October 28, 2011

The Dow Chemical Company
Midland, Michigan 48674
USA

CERTIFIED MAIL
7007 2680 0001 3778 6545

Liane J. Shekter Smith, Chief
Michigan Department of Environmental Quality
Resource Management Division
P.O. Box 30241
Lansing, MI 48909

cc: Cheryl Howe, MDEQ – P.O. Box 30241, Lansing, MI 48909;
Al Taylor, DEQ – P.O. Box 30241, Lansing, MI 48909;
Trisha Confer, DNRE – Saginaw Bay District Office, 401 Ketchum Street, Suite
B, Bay City, MI 48708.

SUBJECT: REVISED LEL I POST CLOSURE HYDRAULIC MONITORING AND
MAINTENANCE PLAN (PCHMMP); EPA FACILITY NUMBER MID 000
724 724

In accordance with Attachment 28 (Compliance Schedule) of the Act 451 Part 111 Operating License issued to The Dow Chemical Company, Michigan Division, effective June 12, 2003 (Operating License), Dow is submitting the revised *LEL I Post Closure Hydraulic Monitoring and Maintenance Plan* (PCHMMP). This report was prepared by URS Corporation on behalf of The Dow Chemical Company, Michigan Operations.

This document, upon MDEQ approval, will be incorporated into the appropriate monitoring and inspection sections of the Operating License.

If you have any questions regarding this information, please contact Martin Crook at 989-638-9552.

Dan Rader
EH&S Responsible Care Leader
Environment, Health and Safety
1790 Building, Washington Street
Midland, MI 48674
(989) 636-2646

Enclosure

mde

The Dow Chemical Company
Compliance Schedule Task M-3
LEL I Post Closure Hydraulic
Monitoring and Maintenance Plan
(PCHMMP)

October 21, 2011

Prepared by URS Corporation

Table of Contents

1.0 Introduction.....	1
2.0 History.....	1
3.0 Inspection Activities	2
3.1 Security	2
3.2 Site Cover.....	2
3.3 Piezometer Monitoring	3
4.0 Maintenance Activities	3
4.1 Site Cover.....	3
4.2 Detention Basin/Restricted Outlets.....	3
4.3 Piezometer Monitoring	4
4.4 East-Side RGIS	4
5.0 Monitoring Activities.....	4
5.1 Slurry Wall Monitoring.....	4
5.2 Storm Water Detention	4
6.0 Data Evaluations and Corrective Measures Assessments.....	5

Attachments

Attachment 1	Piezometer Locations
Attachment 2	Inspection Form

LEL I POST-CLOSURE HYDRAULIC MONITORING AND MAINTENANCE PROGRAM

1.0 INTRODUCTION

There are three Localized Elevated Level (LEL) containment unit locations in Michigan Operations, identified as LELs I, II, and III. These units were identified as containing elevated levels of 2,3,7,8-TCDD (TCDD) in the 1984 Point Source Study conducted by The Dow Chemical Company (Dow).

LEL monitoring and maintenance plans have previously been described in the Corrective Action Monitoring Plan (CAMP), February 14, 1989. This Post-Closure Hydraulic Monitoring and Maintenance Plan (PCHMMP) for LEL I is designed to replace the CAMP contained in the February 14, 1989 submittal, and has the following objective:

- Provide adequate long-term, post-closure hydraulic monitoring and maintenance of LEL I to ensure the integrity of the containment system and minimize the potential for groundwater migration from the unit.

2.0 HISTORY

Prior to 1982, the area now known as LEL I was a production area for several products, including chlorinated phenols. The production plants located at the site were demolished in 1982.

LEL I is underlain by naturally-occurring, low-permeability lacustrine clay and glacial tills which serve as a barrier to vertical migration of waste constituents, and was closed as a landfill when an Interim Measure (IM) was conducted in 1987. The IM consisted of the installation of a 12,225 square foot cement-bentonite, vibrated beam slurry wall around the former plant tank farm and sump keyed into underlying clay, and an asphalt cap. Because LEL I is situated upland from the east bank of the Tittabawassee River and upgradient of the Midland Plant Revetment Groundwater Interception System (RGIS),

the RGIS collects all groundwater at this location of the plant perimeter and is operated to maintain an inward gradient.

Dow plans to construct a truck parking lot on a portion of the LEL I site and a vegetated storm water detention basin. Design plans were submitted to the MDEQ under separate cover and were approved on May 27, 2011. Construction of the truck parking and storm water detention will be completed in late 2011. Construction of the detention basin and parking lot will provide an improved cover over LEL I.

3.0 INSPECTION ACTIVITIES

Inspections will include the following activities with observations and corrective measures documented as specified on the Inspection Form (example provided as Attachment 2):

3.1 Security

This interior area of plant is subjected to regular drive-by inspections by Dow's Emergency Services and Security Department, and is not accessible to the general public.

3.2 Site Cover

The site cover includes the planned paved truck parking and vegetated storm water detention. The asphalt parking area cover includes a woven geotextile, aggregate base, leveling course and asphalt top course. A 40 mil Linear Low Density Polyethylene (LLDPE) geomembrane extends ten feet beyond the area enclosed by a vibrated beam slurry wall. The vegetated storm water detention area includes a 40 mil LLDPE geomembrane and approximately 12 inches of fill. The cap will have documented inspections twice annually for settlement.

The detention basins, restricted outlets, and under drains will have documented inspections to help maintain proper drainage in the spring, fall, and after every 2-inch or greater rainfall event.

3.3 *Piezometer Monitoring*

Piezometers will be visually inspected at the time of static water level measuring. They are not included on the routine Inspection Form. The specific details of piezometer monitoring, documented inspections and sampling/measuring are included in the Facility SAP (Attachment 24 of the Facility License).

4.0 MAINTENANCE ACTIVITIES

Required maintenance or corrective measure-type actions will be based on the following activities:

4.1 *Site Cover*

The site cover will continue to be maintained as appropriate. Remaining vegetated areas (i.e. grass) will be mowed in the spring/summer as necessary. Any areas of dead vegetation will be re-planted as necessary.

4.2 *Detention Basin/Restricted Outlets*

Maintenance of the newly-constructed detention basin will consist of cleaning the basin's restricted outlet and the under drains of paved areas to prevent or remove clogging and ensure they function properly. If water drainage patterns suggest a blockage or obstruction has occurred, an inspection of the area will be conducted and corrective measures to restore proper functionality will be implemented (i.e. jetting of drain, cleanout of restricted outlet, etc).

Settlement detected that will affect drainage over capped areas will be repaired depending on the functional area in which the settlement occurs. If settlement occurs in high-traffic areas where the traffic could exacerbate the settling, then remedies will be evaluated for implementation. Remedies could include but not necessarily be limited to backfilling and traffic re-routing around or away from the settled area.

4.3 Piezometer Maintenance

Piezometers will be repaired or replaced as needed based on the scheduled inspections.

4.4 East-Side RGIS

Maintenance of the RGIS will continue as required by Part X.G. of the Facility License.

5.0 MONITORING ACTIVITIES

Monitoring at LEL I will consist of the hydraulic and chemical monitoring of the east side RGIS as required by Part X.G of the License. In addition, periodic hydraulic monitoring of the North LEL I slurry wall and south storm water detention area will be conducted as described in the following sections.

5.1 Slurry Wall Monitoring

Monitoring of the North LEL I slurry wall include water level measurements of five (5) existing wells on a quarterly basis. Evaluation of hydraulic data will include a review of hydrographs of groundwater to verify the integrity of the slurry wall.

5.2 Storm Water Detention

Monitoring of the South LEL I storm water detention area will include water level measurements of 10 existing wells on a quarterly basis, or after

a rain event sufficient to result in ponding of water for 24 to 48 hours. Monitoring may be discontinued if no evidence of increased recharge from detention has been identified after three years (by December of 2014).

Water level data will be reported within the Quarterly Environmental Monitoring Reports. The LEL I hydraulic monitoring program shall be documented in the SAP, Attachment 24 of the license. A map indicating existing piezometer locations is included for reference as Attachment 1.

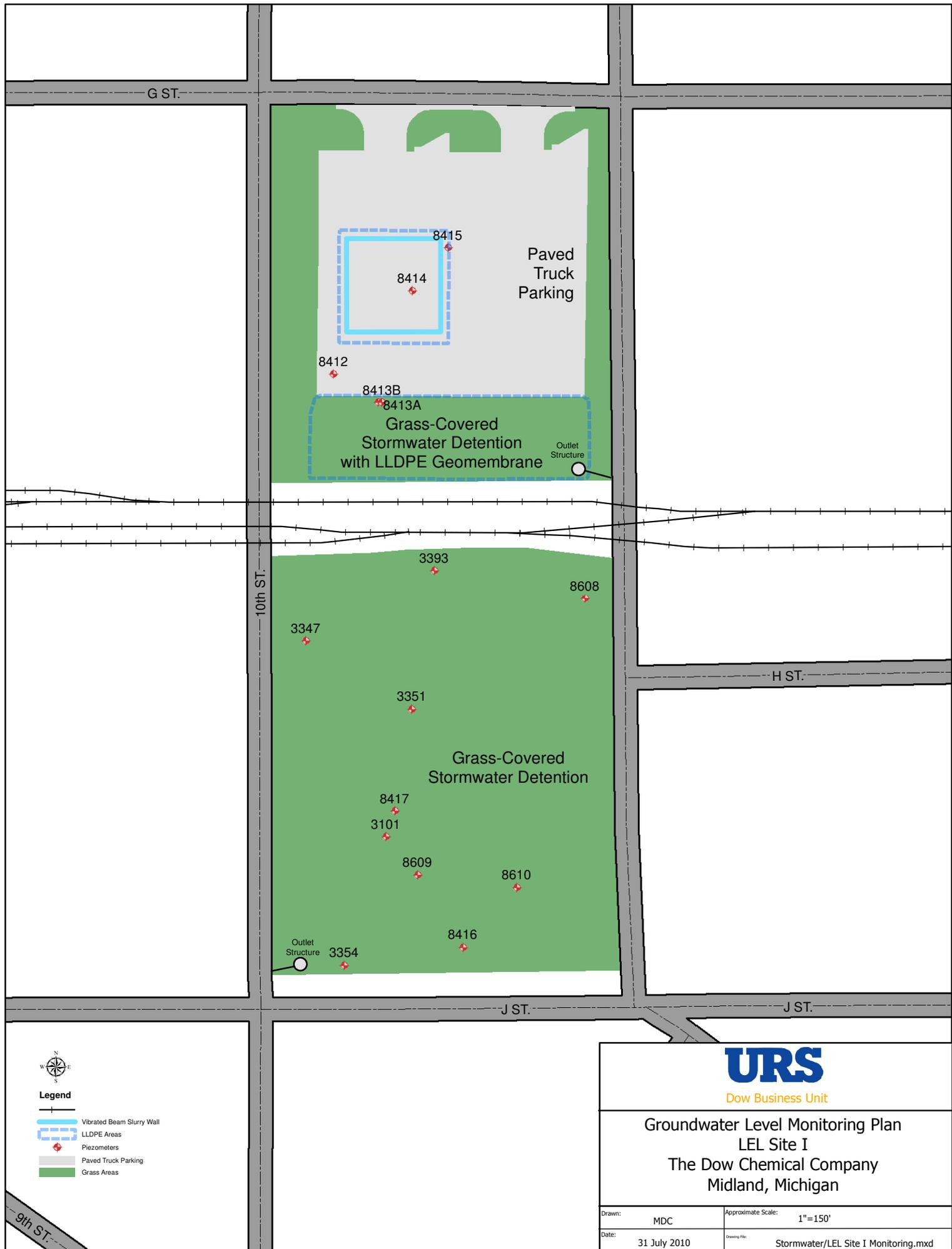
6.0 DATA EVALUATIONS AND CORRECTIVE MEASURES ASSESSMENTS

If hydraulic evaluations suggest a deficiency with the slurry wall or significant infiltration resulting from the South storm water detention area, then further corrective measures will be assessed. Corrective measures for the cap will entail asphalt cap repairs and cleanout of the detention basin and drains as required. A work plan will be submitted to the MDEQ for the implementation of additional corrective action as appropriate should monitoring suggest a deficiency with the slurry wall.

Corrective measures deemed necessary for RGIS are addressed in the Facility License, Part X.G.

ATTACHMENTS

ATTACHMENT 1
Piezometer Locations



Groundwater Level Monitoring Plan
LEL Site I
The Dow Chemical Company
Midland, Michigan

Drawn:	MDC	Approximate Scale:	1"=150'
Date:	31 July 2010	Drawing File:	Stormwater/LEL Site I Monitoring.mxd

ATTACHMENT 2
Inspection Form

LEL I PCMMP Inspection Form

Procedure checklist

Use the following steps to inspect LEL I.

Step	Action (and Hazard/Precaution if applicable)	Initials date/time
1	<p><u>Asphalt/Vegetative Cover</u></p> <p>All areas will be inspected for settlement. If settlement occurs, the settled area will be filled as necessary. If settlement is observed, note it in the comments section of this inspection form below. Indicate the settling location on the aerial photo, and write a work request for repair as necessary.</p> <p>Vegetative cover shall be inspected for areas of dead vegetation. Vegetated areas (i.e. grass) will be mowed in the spring/summer as necessary. Any areas of dead vegetation will be re-planted as necessary.</p> <p>Asphalt/Vegetative Cover inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	

2	<p><u>Run-off and Run-on Control</u></p> <p>The drainage swales to divert storm water across and off site will be checked at least once during the spring and fall seasons to assure proper drainage.</p> <ul style="list-style-type: none"> • Drains and swales will be cleaned and maintained to allow free drainage so that retention of storm water on the asphalt cap is minimized. <p>Detention basins, restricted outlets, and under drains will have documented inspections to help maintain proper drainage in the spring, fall, and after every 2-inch or greater rainfall event.</p> <ul style="list-style-type: none"> • Maintenance of detention basins will consist of cleaning the restricted outlets and the under drains of vegetated areas to help prevent or remove clogging. If water drainage patterns suggest a blockage or obstruction has occurred, an inspection of the area will be conducted and corrective measures to restore proper functionality will be implemented (e.g. jetting of drain, or cleanout of restricted outlet). <p>If unexpected ponding of water is observed to extend beyond the anticipated drainage times, note it in the comments section on this inspection form below, mark its location on the aerial photo, and write a work request for a repair.</p> <p>Run-off and Run-on Control inspected – circle one: Yes or No</p> <p>Comments:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Work Order number: _____</p>	
---	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

LEL II

Post-Closure Monitoring and Maintenance Plan



October 1, 2010

The Dow Chemical Company
Midland, Michigan 48674
USA

CERTIFIED MAIL
7007 2680 0001 3778 5395

Liane J. Shekter Smith, Chief
Department of Natural Resources and Environment
P.O. Box 30241
Lansing, MI 48909

cc: Al Taylor, DNRE – P.O. Box 30241, Lansing, MI 48909;
Trisha Confer, DNRE – Saginaw Bay District Office, 401 Ketchum Street, Suite
B, Bay City, MI 48708.

SUBJECT: LEL II POST CLOSURE HYDRAULIC MONITORING AND
MAINTENANCE PLAN (PCHMMP); EPA FACILITY NUMBER MID 000
724 724

In accordance with Attachment 28 (Compliance Schedule) of the Act 451 Part 111 Operating License issued to The Dow Chemical Company, Michigan Division, effective June 12, 2003 (Operating License), Dow is submitting the enclosed *LEL II Post Closure Hydraulic Monitoring and Maintenance Plan (PCHMMP)*. This report was prepared by URS Corporation on behalf of The Dow Chemical Company, Michigan Operations.

This document, upon DNRE approval, will be incorporated into the appropriate monitoring and inspection sections of the Operating License.

If you have any questions regarding this information, please contact Steve Lucas at 989-638-6012.


Dan Rader
EH&S Responsible Care Leader
Environment, Health and Safety
1790 Building, Washington Street
Midland, MI 48674
(989) 636-2646

Enclosure

meh

The Dow Chemical Company
Compliance Schedule Task M-3
LEL II Post Closure Hydraulic
Monitoring and Maintenance Plan
(PCHMMP)

October 1, 2010

Prepare by URS Corporation

Table of Contents

1.0 Introduction.....	1
2.0 History.....	1
3.0 Inspection Activities	2
3.1 Security	2
3.2 Site Cover.....	2
3.3 Piezometer Monitoring	2
4.0 Maintenance Activities	3
4.1 Security	3
4.2 Piezometer Monitoring	3
4.4 East-Side RGIS	3
5.0 Monitoring Activities.....	3
6.0 Data Evaluations and Corrective Measures Assessments.....	4

Attachments

Attachment 1	Inspection Form
Attachment 2.....	Piezometer Locations

LEL II POST-CLOSURE HYDRAULIC MONITORING AND MAINTENANCE PROGRAM

1.0 INTRODUCTION

There are three Localized Elevated Level (LEL) containment unit locations in Michigan Operations, identified as LELs I, II, and III. These units were identified as containing elevated levels of 2,3,7,8-TCDD (TCDD) in the 1984 Point Source Study conducted by The Dow Chemical Company (Dow).

LEL monitoring and maintenance plans have previously been described in the Corrective Action Monitoring Plan (CAMP). This Post-Closure Hydraulic Monitoring and Maintenance Plan (PCHMMP) for the LEL II is designed to replace the CAMP contained in the February 14, 1989 submittal, and has the following objective:

- Provide adequate, long-term hydraulic monitoring and maintenance of LEL II to ensure the integrity of the containment system and minimize the potential for groundwater migration from the units.

2.0 HISTORY

Prior to its closure as a landfill in 1979, LEL II historically served as the equalization unit within the phenolic treatment process for chlorophenolic and chlorobenzene wastewaters. The site is underlain by naturally-occurring, low-permeability lacustrine clay and glacial tills which serve as a barrier to vertical migration of waste constituents.

Closure activities included a clay cap, and the installation of a 30-inch slurry wall around the perimeter of the entire facility, keyed into the natural, underlying clay. Two areas were subsequently identified as potentially being insufficiently keyed into the clay layer, and were remedied by the installation of vibrated beam slurry walls to eliminate the breaches.

A hydrogeologic investigation conducted after closure suggested that infiltration was occurring through the clay cap, and was remedied through an Interim Measure (IM) by a re-shaping of the cap followed by installation of an impermeable, 30-40 mil HDPE liner, covered by two additional feet of clay which was then layered with topsoil and seeded with grass.

Because LELII is situated upland from the east bank of the Tittabawassee River and upgradient of the Midland Plant Revetment Groundwater Interception System (RGIS), the RGIS collects all groundwater at this location of the plant perimeter and is operated to maintain an inward gradient.

3.0 INSPECTION ACTIVITIES

Inspections will include the following activities with observations and corrective measures documented as specified on the Inspection Form (example provided as Attachment 1)

3.1 Security

This interior area of plant is subjected to regular drive-by inspections by Dow Plant Security and is not accessible to the general public.

3.2 Site Cover

The vegetated cover of LEL II is inspected twice annually. Inspections primarily focus on erosion, settlement, ponding, animal burrows, and overgrowth of trees or bushes that might compromise the integrity of the cap.

3.3 Piezometer Monitoring

The piezometers will be visually inspected at the time of static water level measuring with conditions monitored and documented at that time. They are therefore not included on the routine Inspection Form. The specific

details of piezometer monitoring and sampling/measuring are included in the Facility SAP (Attachment 24 of the Facility License).

4.0 MAINTENANCE ACTIVITIES

Routine maintenance activities will address the following broad categories:

4.1 Site Cover

Vegetated areas (i.e. grass) will be mowed in the spring/summer as necessary. Any areas of dead vegetation will be re-planted as necessary. Any settlement areas will be filled and re-seeded; nuisance shrubs and trees will be pulled, and animal burrows plugged as detected.

4.2 Piezometer Monitoring

Piezometers will be repaired and/or replaced as necessary based on inspections conducted at the time of measuring.

4.3 East-Side RGIS

Maintenance of the RGIS will continue as required by Part X.G. of the Facility License.

5.0 MONITORING ACTIVITIES

Monitoring at LEL II will consist of the hydraulic and chemical monitoring of the east side RGIS as required by Parts X.G of the License. In addition, periodic hydraulic monitoring of the LEL II slurry wall will be conducted. Evaluation of hydraulic data will include a review of hydrographs of groundwater to verify the integrity of the slurry wall. Water level data will be reported within the Quarterly Environmental Monitoring Reports. The LEL II slurry wall hydraulic monitoring program shall be documented in the SAP, Attachment 24 of the license. A map indicating proposed piezometer locations is included for reference as Attachment 2.

6.0 DATA EVALUATIONS AND CORRECTIVE MEASURES ASSESSMENTS

If hydraulic evaluations suggest a deficiency with the LEL II slurry wall, then further corrective measures will be assessed. Corrective measures for the cap will entail asphalt cap repairs and cleanout of the detention basin and drains as required.

Corrective measures deemed necessary for RGIS are addressed in the Facility License, Parts X.G.

ATTACHMENTS

ATTACHMENT 1

Inspection Form

LEL II PCMMP Inspection Form

Procedure checklist

Use the following steps to inspect LEL II.

Step	Action (and Hazard/Precaution if applicable)	Initials date/time
1	<p><u>Erosion of Finished Slopes</u></p> <p>The finished slopes will be checked for washouts during the spring and fall when the ground is not frozen.</p> <p>Finished slopes inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	
2	<p><u>Settlement</u></p> <p>The tops of the closed areas will be inspected for unexpected ponding during the spring and fall seasons when temperatures are above freezing.</p> <p>Inspection for settlement – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	

Continued on next page

LEL II PCMMP Inspection Form, continued

3	<p><u>Final Cover (Vegetative and Asphalt)</u></p> <p>The final cover will be inspected for adequacy at least once during spring and fall seasons.</p> <p>Final Cover Inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____ _____</p> <p>Work Order number: _____</p>	
4	<p><u>Run-off and Run-on Control</u></p> <p>The drainage swales to divert storm water across and off site will be checked at least once during the spring and fall seasons to assure proper drainage.</p> <p>Run-off and Run-on Control inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____ _____</p> <p>Work Order number: _____</p>	

ATTACHMENT 2

Piezometer Locations



Legend

- ◆ Existing Wells
- Containment Slurry Walls**
- cement-bentonite
- vibrated beam
- Area Designated as LEL (Locally Elevated Levels)



**Attachment 2
Piezometer Locations
LEL II**

Drawn: JLH	Checked: LH	Scale: 1 inch = 200 feet
Date: 23 August 2010	Drawing File: LEL2-Attachment 2.mxd	

LEL III

Post-Closure Monitoring and Maintenance Plan



October 1, 2010

The Dow Chemical Company
Midland, Michigan 48674
USA

CERTIFIED MAIL
7007 2680 0001 3778 5401

Liane J. Shekter Smith, Chief
Department of Natural Resources and Environment
P.O. Box 30241
Lansing, MI 48909

cc: Al Taylor, DNRE – P.O. Box 30241, Lansing, MI 48909;
Trisha Confer, DNRE – Saginaw Bay District Office, 401 Ketchum Street, Suite
B, Bay City, MI 48708.

SUBJECT: LEL III POST CLOSURE HYDRAULIC MONITORING AND
MAINTENANCE PLAN (PCHMMP); EPA FACILITY NUMBER MID 000
724 724

In accordance with Attachment 28 (Compliance Schedule) of the Act 451 Part 111 Operating License issued to The Dow Chemical Company, Michigan Division, effective June 12, 2003 (Operating License), Dow is submitting the enclosed *LEL III Post Closure Hydraulic Monitoring and Maintenance Plan (PCHMMP)*. This report was prepared by URS Corporation on behalf of The Dow Chemical Company, Michigan Operations.

This document, upon DNRE approval, will be incorporated into the appropriate monitoring and inspection sections of the Operating License.

If you have any questions regarding this information, please contact Steve Lucas at 989-638-6012.

Dan Rader
EH&S Responsible Care Leader
Environment, Health and Safety
1790 Building, Washington Street
Midland, MI 48674
(989) 636-2646

Enclosure

meh

The Dow Chemical Company
Compliance Schedule Task M-3
LEL III Post Closure Hydraulic
Monitoring and Maintenance Plan
(PCHMMP)

October 1, 2010

Prepared by URS Corporation

Table of Contents

1.0 Introduction.....	1
2.0 History.....	1
3.0 Inspection Activities	2
3.1 Security	2
3.2 Site Cover.....	2
3.3 Piezometer Monitoring	3
4.0 Maintenance Activities	3
4.1 Site Cover.....	3
4.2 Piezometer Monitoring	3
4.3 East-Side RGIS	3
5.0 Monitoring Activities.....	4
6.0 Data Evaluations and Corrective Measures Assessments.....	4

Attachments

Attachment 1	Inspection Form
--------------------	-----------------

Figures

Figure 1	LEL Inspection Site Plan
----------------	--------------------------

LEL III POST-CLOSURE HYDRAULIC MONITORING AND MAINTENANCE PROGRAM

1.0 INTRODUCTION

There are three Localized Elevated Level (LEL) containment unit locations in Michigan Operations, identified as LELs I, II, and III. These units were identified as containing elevated levels of 2,3,7,8-TCDD (TCDD) in the 1984 Point Source Study conducted by The Dow Chemical Company (Dow).

LEL monitoring and maintenance plans have previously been described in the Corrective Action Monitoring Plan (CAMP), February 14, 1989. The Post-Closure Hydraulic Monitoring and Maintenance Plan (PCHMMP) for the LEL III contained herein is designed to replace the CAMP contained in the February 14, 1989 submittal, and carries the following objective:

- Provide adequate long-term hydraulic monitoring and maintenance of LEL III to ensure the integrity of the containment system and minimize the potential for groundwater migration from the units.

2.0 HISTORY

LEL III originated from the deposition of precipitated material that settled out of wastewater flowing in conduits connected to the onsite Wastewater Treatment Plant (WWTP). The 1984 Dow Dioxin Source Study identified the abandoned conduits as a source of 2,3,7,8-TCDD to the WWTP; the area came to be identified as LEL III.

LEL III was closed as a landfill in 1988. An Interim Measure (IM) was conducted in which either a soil-bentonite slurry wall or cement-bentonite grouted wall was installed and connected to existing containment features (i.e. clay diking of a closed waste management unit to the southwest and the LEL II slurry wall to the northeast) and keyed into underlying clay.

The site is underlain by naturally-occurring, low-permeability lacustrine clay and glacial tills which serve as a barrier to vertical migration of waste constituents.

On September 17, 2010, Dow submitted a proposal to construct onsite storm water detention areas that will include cap enhancements to some areas of the LEL III. The constructed detention basins and restricted outlets will be inspected in the spring, fall, and after every 2-inch or greater rainfall event to ensure proper drainage. The design plans provide an opportunity to enhance portions of the LEL III cap and surrounding areas through the installation of HDPE liners where detention ponds are proposed for construction. An aerial overview of the LEL III area is included as Figure 1.

Because LEL III is situated along the east bank of the Tittabawassee River upgradient of the Midland Plant Revetment Groundwater Interception System (RGIS), the RGIS collects all groundwater at this location of the plant perimeter and is operated to maintain an inward gradient.

3.0 INSPECTION ACTIVITIES

Inspections will include the following activities with observations and corrective measures documented as specified on the Inspection Form (example provided as Attachment 1):

3.1 Security

This interior area of plant is subjected to regular drive-by inspections by Dow's Emergency Services and Security Department, and is not accessible to the general public.

3.2 Site Cover

The site cover currently consists primarily of vegetation. Inspections primarily focus on erosion, settlement, ponding, animal burrows, and

overgrowth of trees or bushes that might compromise the integrity of the cap. The constructed detention basins and restricted flow outlets will be inspected in the spring, fall, and after every 2-inch or greater rainfall event.

3.3 Piezometer Monitoring

Piezometers will be visually inspected at the time of static water level measuring with conditions monitored and documented at that time. They are therefore not included on the routine Inspection Form. The specific details of piezometer monitoring and sampling/measuring are included in the Facility SAP (Attachment 24 of the Facility License).

4.0 MAINTENANCE ACTIVITIES

Routine maintenance activities will address the following broad categories:

4.1 Site Cover

Vegetated areas (i.e. grass) will be mowed in the spring/summer as necessary. Any areas of dead vegetation will be re-planted as necessary. Any settlement areas will be filled and re-seeded; nuisance shrubs and trees will be pulled, and animal burrows plugged as detected.

4.2 Piezometer Monitoring

Piezometers will be repaired and/or replaced as necessary based on inspections.

4.3 East-Side RGIS

Maintenance of the RGIS will continue as required by Part X.G. of the Facility License.

5.0 MONITORING ACTIVITIES

Monitoring at LEL III will consist of the hydraulic and chemical monitoring of the east side RGIS as required by Parts X.G of the License. In addition, periodic hydraulic monitoring of the LEL III slurry wall will be conducted. Evaluation of hydraulic data will include a review of hydrographs of groundwater to verify the integrity of the slurry wall. Water level data will be reported within the Quarterly Environmental Monitoring Reports. The LEL III slurry wall hydraulic monitoring program shall be documented in the SAP, Attachment 24 of the license.

Monitoring at LEL III will be supplemented by the hydraulic and chemical monitoring of the east side RGIS as required by Parts X.G.

6.0 DATA EVALUATIONS AND CORRECTIVE MEASURES ASSESSMENTS

If hydraulic evaluations suggest a deficiency with the LEL II slurry wall, then further corrective measures will be assessed. Corrective measures for the cap will entail asphalt cap repairs and cleanout of the detention basin and drains as required.

Corrective measures deemed necessary for RGIS are addressed in the Facility License, Parts X.G.

ATTACHMENTS

ATTACHMENT 1
INSPECTION FORM

LEL III PCMMP Inspection Form

Procedure checklist

Use the following steps to inspect LEL III.

Step	Action (and Hazard/Precaution if applicable)	Initials date/time
1	<p><u>Erosion of Finished Slopes</u></p> <p>The finished slopes will be checked for washouts during the spring and fall when the ground is not frozen.</p> <p>Finished slopes inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	
2	<p><u>Settlement</u></p> <p>The tops of the closed areas will be inspected for unexpected ponding during the spring and fall seasons when temperatures are above freezing.</p> <p>Inspection for settlement – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	

Continued on next page

LEL III PCMMP Inspection Form, continued

3	<p><u>Final Cover (Vegetative and Asphalt)</u></p> <p>The final cover will be inspected for adequacy at least once during spring and fall seasons.</p> <p>Final Cover Inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	
4	<p><u>Run-off and Run-on Control</u></p> <p>The drainage swales to divert storm water across and off site will be checked at least once during the spring and fall seasons to assure proper drainage.</p> <p>Run-off and Run-on Control inspected – circle one: Yes or No</p> <p>Comments: _____ _____ _____ _____</p> <p>Work Order number: _____</p>	

FIGURES

